REMARKS

Claims 1-16 remain in the application. Reexamination and reconsideration of the application are requested.

Claims 1 and 6-8 are rejected under 35 U.S.C. 102(b) as anticipated by Jackson USP 5,793,871. Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson in view of Chen USP 7,146,109. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson in view of Krause USPN 4448529. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson in view of Young 20060291859. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson in view of Soref USP 6,114,994. The Examiner stated:

> Regarding argument wherein Jackson failure to disclose "'sub-bands' " of data spectrum" as recited in claims 1 and 9, remark page 9 lines 16-23, argument is not persuasive because Jackson teaches an analog optical signal security system (see abstract), and a spatial light modulator splitting a first serial optical digital data stream into a first portion and a second portion (see claim 21) that reads on spectral sub-bands.

These rejections are respectfully traversed.

Claims 1-16 are directed to methods and systems comprising a number of steps or features in combination. The claimed combinations are neither disclosed nor suggested in Jackson, viewed alone or together with other references.

For example, claim 1 recites a method for secure transmission of an information-containing optical signal in a reflective/transmissive architecture comprising a number of steps in combination. The claimed combination includes the steps of dividing the optical signal into a first plurality of spectral sub-bands, modifying each of the first plurality of spectral sub-bands to encrypt the information contained in the optical signal, combining the modified first plurality of spectral sub-bands into a combined optical signal, dividing the combined optical signal into a second plurality of spectral sub-bands, modifying each of the second plurality of spectral sub-bands to

decrypt the previously encrypted information contained in the optical signal. The combined steps recited in claim 1 are neither disclosed nor suggested in Jackson,

Claim 1 requires that the optical signal must be divided into a first plurality of spectral sub-bands. There is no teaching or suggestion in Jackson of dividing an optical signal into a first plurality of spectral sub-bands, and the 3/12/08 Office Action fails to identify any such teaching or suggestion. Absent any teaching or suggestion of a combination including the step of dividing an optical signal into a first plurality of spectral sub-bands, the rejection based on Jackson is improper and must be withdrawn.

Claim 1 requires that each of the first plurality of spectral sub-bands must be modified to encrypt the information contained in the optical signal. There is no teaching or suggestion in Jackson of modifying each of a first plurality of spectral sub-bands to encrypt information contained in an optical signal, and the 3/12/08 Office Action fails to identify any such teaching or suggestion. Absent any teaching or suggestion of a combination including the step of modifying each of a first plurality of spectral sub-bands to encrypt information contained in an optical signal, the rejection based on Jackson is improper and must be withdrawn.

Claim 1 requires that the modified first plurality of spectral sub-bands must be combined into a combined optical signal. There is no teaching or suggestion in Jackson of combining a modified first plurality of spectral sub-bands into a combined optical signal, and the 3/12/08 Office Action fails to identify any such teaching or suggestion. Absent any teaching or suggestion of a combination including the step of combining a modified first plurality of spectral sub-bands into a combined optical signal, the rejection based on Jackson is improper and must be withdrawn.

Claim 1 requires that the combined optical signal must be divided into a second plurality of spectral sub-bands. There is no teaching or suggestion in Jackson of dividing a combined optical signal into a second plurality of spectral sub-bands, and the 3/12/08 Office Action fails to identify any such teaching or suggestion. Absent any teaching or suggestion of a combination including the

step of dividing a combined optical signal into a second plurality of spectral sub-bands, the rejection based on Jackson is improper and must be withdrawn.

Claim 1 requires that each of the second plurality of spectral sub-bands must be modified to decrypt the previously encrypted information contained in the optical signal. There is no teaching or suggestion in Jackson of modifying each of a second plurality of spectral sub-bands to decrypt previously encrypted information contained in an optical signal, and the 3/12/08 Office Action fails to identify any such teaching or suggestion. Absent any teaching or suggestion of a combination including the step of modifying each of a second plurality of spectral sub-bands to decrypt previously encrypted information contained in an optical signal, the rejection based on Jackson is improper and must be withdrawn.

The 3/12/08 Office Action does assert that Jackson teaches an analog optical signal security system and a spatial light modulator splitting a first serial optical digital data stream into a first portion and a second portion (see claim 21). The 3/12/08 Office Action asserts that this disclosure anticipates the spectral sub-bands defined by claim 1. Applicants respectfully disagree.

Jackson teaches a method in which time domain data is first rastered to a 2-D spatial light modulator, the phase of each data byte (pixel) is altered, a 2-D hologram is created and then that data is rastered out into a serial data stream. There is no teaching or suggestion in Jackson that spectral sub-bands are created or operated upon. Jackson's claim 21 recites splitting a first serial digital data stream into a "first portion and a second portion." This clearly refers to serial demultiplexing of the data stream in order to separate the header data from the content data, corresponding to the teaching present in Jackson. Jackson is operating on data bytes (pixels), and Jackson's claim 21 is directed to how the header data (the "first portion" of the data stream) can bypass the encryption process. Jackson does not disclose or suggest operating on spectral sub-bands, and there is nothing in Jackson's claim 21 or elsewhere to suggest that Jackson is creating or operating on spectral sub-bands.

Independent claim 9 is patentably distinct from Jackson for reasons similar to those given above with respect to claim 1. Claim 9 is directed to a system for secure transmission of an information-containing optical signal comprising a number of elements in combination. The combined features recited in claim 9 are neither disclosed nor suggested in Jackson,

The fundamental deficiencies of Jackson are not compensated by any of the additional cited and applied references.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 509622001100.

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